MILATARI

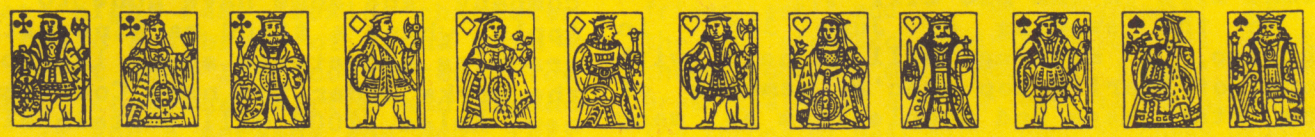
Vol.5 Nbr 7 Price $1.50 June 1986

Calendar of Events:

June 21

BASIC class & ST SIG 2:15 PM
Business meeting 3:30 PM
Hybrid Arts MIDI Interface Demo 4 PM
by Bob Dermarais of Cascio Music

July 19 Annual Swapfest **Aug 23** Annual Picnic



I been waiting for YOU to write an Article for the MILATARI Newsletter

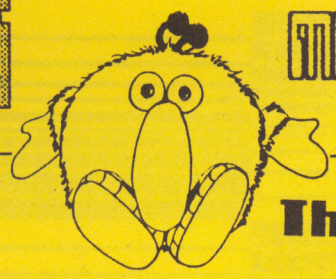
3rd. Annual MILATARI PICNIC

It's that time of year again to start thinking about outside fun, food and drink. This years picnic will be at FALK PARK, 2013 W. Rawson Ave, Oak Creek. It is just west of I94, on Rawson Ave. The date is Saturday, August 23, from 1:00 p.m. to 6:00 p.m. PLEASE NOTE THIS IS THE FOURTH SATURDAY!

The outside area has room for grills, chairs, and outdoor sports. There also is a long nature trail. It also has a large area indoors with tables and chairs set up, a stage, and a complete kitchen.

We will have soda, beer, and some treats for all club members. If you have some ideas about the Picnic, call me, or any Board Member before or during the July meeting.

Carl Mielcarek



The Fuzzy Nolan Review BY GARY NOLAN

UEEELLL EXCUUUUSSSE MEEEEE!!!
(PUT A LITTLE MORE BBQ SAUCE ON THAT CROW, PLEASE)

In last months newsletter I mentioned that Atari Canada was sending the user groups up north a monthly newsletter, and gee wouldn't it be nice if "Daddy J" would do the same for us poo' folks down south. Well before that issue went to press (But not in time to stop it) what should arrive in our mail box but a newsletter published by the big "A" itself. We might be at the end of the list because most of the "news" had already been known by us. But this does show an interest on Atari's part in the user groups and their need to be informed. And if the news was a little old it was because this was the first issue. Now lets see how they (Atari) persue this avenue of communication. This could be the start of something good for all involved.

NIGHT LIFE IN THE BIG CITY

On the evening of June 3rd, in Chicago, a meeting will be held with some of Atari's top exec's members of the Atari mags and people from as many user groups as can attend. This meeting was put together by the ChicagoLand group and is held in conjunction with the CES. Milatari will be represented by several people and a full report will be given at the June meeting along with the annual Summer CES report.

RING THEM BELLS

At the June meeting we will have a demonstration of the Hybred Arts MIDI interface for the Atari computers. The demo will be given by Bob Dermarais of Cascio Music Co. in New Berlin. This will be a must for you music people and should be very interesting.

IT'S COMING 'ROUND THE BEND

One of the main topic of interest at the upcoming Atari/U.G. meeting will be the IBM emulator. If it's not shown at CES then when will it be out? It should be before the end of summer as Atari is in the final process of signing an OEM agreement with Microsoft for its PC-DOS, GW Basic package. The emulator will be an add-on box with its own 8088 chip and some expansion slots, making the ST a dual processor machine. With that and the Mac cartridge (if it makes it out) what more could ask for? Except maybe a 32-bit enhancement and a graphics co-processor.

IT AIN'T OVER TILL ITS OVER
(DON'T TURN OUT THE LIGHTS JUST YET)

Troubles continue to mount at Commodore. Another round of lay-offs are expected if they haven't already taken place. Since Jan. 1st, 25% of the employees have been laid off and the dollar loss continues to the tune of about $36 million. Reports of conflicting attitudes towards the Amiga continue to be heard. Some sources say that the top exec's really don't like the unit and want to drop it. And other reports say that new models are being planned. (Bet on the last one) Some of the Amiga's designers have left the company and some have gone to work at Apple where a $1600 machine with great graphics and stereo sound is reported in the works under the name Courtland. The new Amiga 2000 will contain slots for expansion of memory to 2 meg and to add PC compatibility. It could be configured with two 3 1/2" floppies and one 3 1/2" hard drive or a 5 1/4" floppy and a 5 1/4" hard disk for the PC people. Add to this the rumor about Comm. bringing the PC-10 to the states from Europe and the water becomes very cloudy. One person who orked on the Amiga project and has since left said that Commodore exec's don't want to continue selling the Amiga but the banks that are backing (and some say running) the company still want to make it a successful system.

TID BITS

Okidata has announced a "Plug N Print" kit for the Atari line of ST computers . With a retail price of $99 this kit allows the ST's to use all the features of the Okimate 20 printer.
XLENT Software has announced a bunch of new products for both the 8-bit and the ST line of computers. Among them are MegaFont II+, MegaFont ST, MegaFiler, Rubber Stamp, Rubber Stamp ST, Type-

setter, Typesetter St, ST Music Box, Page Designer, Trivia Mania, Miniature Golf Construction Set, The First XLENT Word Processor and last but not least my favorite Hypnosis with Brainwave Synchronization.

Hypnosis w/BS is designed for anyone interested in hypnosis for relaxation or self improvement. It replaces expensive synchronizing strobes and allows the screen to be adjusted by either the keyboard or with paddle controllers and works with audio tapes played on the Atari cassette recorder. I wonder if Bill Somotti still gets our newsletter.

MegaFont, Typesetter and Rubber Stamp can all be used together or alone and between the three give you the ability to manipulate text and graphics in a multitude of ways and when you toss in Page Designer the features are too numerous to list here and now. Just some of the features are listed to give you an idea of the flexibility of these programs.

Rubber Stamp allows you to create your own logos, letterheads, labels ect.. You can create high res, 16x16 character sets and build a library of icons with a special Print Shop icon converter. You can invert, compress, mirror and expand graphics 7+ and 8 screens and add text to the graphics.

Typesetter allows you to use the Rubber Stamp and Page Designer files to customize the output to produce a professional looking output.

ST Music Box will let you compose for a MIDI keyboard and the ST's speaker at the same time, alter the MIDI instrument selection for each of 4 channels PER measure, save an individual voice or the whole composition or to load a rhythm for a whole voice. You can play any combination of of voices and watch them on the dynamic player display. It also has those features that you would expect to find on a music program.

MegaFont II+ lets you design your own fonts and to print GR 7+,8 and Koala screens and Typesetter/Rubber Stamp icons in multiple sizes.

For more information about these programs see me at the June meeting and you can review the lit. in more detail.

ChessMaster 2000

by Electronic Arts
Game Review by
Steven L. Armstrong

Programmed by:
Software Country - Suite 204
9713 Santa Monica Boulevard
Beverly Hills, California 90210
Telephone (213) 278-8450

Versions of Chessmaster 2000 are available for the Amiga, Atari ST, Apple II, Commadore 64/128 computers, and all Atari computers with 48K or more memory. It retails for $30 to $40. This program is intended to provide the user with a worthy but understanding chess opponent and tutor. It comes with a library of one hundred classic world championship games selected from the last 300 years. The program boasts," a mamoth opening library of over 71,000 moves--the world's largest". And it is one tough opponent.

The cover proclaims this program as "The Finest Chess Program in the World". The backside claims "...the most powerful computer chess program in the world today--and the friendliest!" and "The Chessmaster 2000 is the new standard against which all computer chess programs must now be judged!" Rather brash claims in a world with many claimants to the throne of best microcomputer chess program.

After more than 40 hours with this game I am happy to commend the program on many points and regret having to point out a couple of minor but detracting points.

Want the bad news first? That's the way I like it. First problem is the hint mode. It works just fine on my Atari with one exception. Once you take back a move the hints displayed no longer seem to apply to the game. They became dumb, ridiculus and even impossible. I learned to ignore and shut off the hints once I took back a move. On the plus side it should be noted that when I followed the hints through to endgame (without taking back moves) they worked just fine. Using level 4 I played to a draw twice, won twice and lost once using the hints. This shows that the hints displayed are definitely worth considering, at least in human versus computer play. Because taking back a move is so easy it is always tempting. And I confess I preferred taking back moves to learn from my many mistakes (failures to observe and see ahead).

The other detraction was the lack of provision for joystick operation for my 48K

Atari. ST users and Amiga users get to use their rolling rodents. Commodore 128 users will get to use their joysticks. The explanation I received was that a mere 30 bytes of space remained unused in the Atari version. Anybody have a 30 byte routine to read joysticks and translate them into algebraic chess notation? I would gladly trade the 3D screen for a joystick routine! Software Country take note! The less getting between me and the play of the game the better! Admittedly, it is good chess discipline to learn the algebraic notation by having to keying it in.

Chessmaster 2000's good points are many. There is an easy to use control screen where you may take advantage of the many features and provisions of Chessmaster 2000. You simply toggle between the display screen and control screen using the Escape key. Using control key combinations you can save and load games, change the chessboard and colors, change the levels of difficulty and playing styles, choose whether or not to have sound effects, hints, or teaching aids, change sides, take back moves, or set up classic problems. You can play against Chessmaster 2000 or another human or have Chessmaster 2000 play itself. One facinating feature is the 'Show Thinking' option. I like to see the moves it considers and see which moves are prime candidates.

The documentation is pleasant to read and use without being overwhelming. Included with the software is a discount membership application for joining the US Chess Federation. There is a brief tutorial on the legal moves for each piece and a facinating overview of the game in the manual. There is a separate 10 page set of instructions for the actual operation of the program. The 5$ fee for a replacement disk is quite reasonable.

The graphics are impressive. They convey the image of finely crafted chess pieces. They do not detract from the game but the board display inspires a few moments of admiration when you first get the game. The 3D board display is very attractive but I found myself using the 2D board with algebraic borders exclusively. I prefered to use this board because it best facilitated my play (I didn't have to mentally impose the grid system upon the board).

I am not sure how a 'mammoth 71,000 openning move library' fits in a 48,000 byte computer and I don't think I am qualified to or interested in verifying this claim. I do make the following observations: when it stays within its 'book' it makes its moves in less than the time alotted. Getting the program out of its 'book' of moves is the first objective in human/computer play. Once it has to spend precious time calculating the worth of each possible move it becomes possible for a human blessed with farsight, imagination, and vast chess experience, to beat it.

There are 20 levels with easy and hard modes, and something called "coffeehouse" style of play which provides additional randomness to the 'degree of thought' given to the moves it evaluates in the time allotted.

After playing with the program for a few days I wanted to give this program an unfair trial. So I took my Atari 800XL, a diskdrive and review copy of Chessmaster 2000 over to challenge a good friend of mine to exhibit his abilities at busting computer chess programs. This friend is the sort of fellow who has played exhibition chess against two dozen people at a time in various Chicago shopping centers. And he has accrued 95% of the US Chess Federation points needed to earn the title of Chess Master. He claimed he could play blindfolded using algebraic notation and beat any microcomputer chess program in a match. His microcomputer chess experience comes from playing agianst Sargon III on his MacIntosh, a highly rated Computer Chess program.

My friend was quite confident, perhaps a bit boastful, and anticipated another rout of brilliant tactician versus dull number crunching machine. Based on his predictions we anticipated an hour or so of chess program busting and having some time to compare computers and try out adventure games. We set the Chessmaster 2000 to work in its three minute mode (level 10 of 20 levels) on the 800XL and engaged in it in battle.

About a dozen times we took our turn 'pushing the wood' and it appeared that some hard fought ground was gained after close to an hour's play. It was amazing to me that Sargon III (on the 16 bit Mac) and Chessmaster (on the 8 bit Atari) so closely agreed in their responses to our first moves. My friend had opted to use a briskly developing attack to get our cybernetic opponent into hot water early; "Got to get it out of its book" said my friend. We worked ourselves (mostly through my friend's masterful and insightful efforts) to a point of a small material and positional advantage.

Then something seemed to go wrong. We began loosing pieces in unanticipated trades which left our attacks foiled and our flanks

vulnerable. Sargon III (on the speedy 7.83 Mhz MacIntosh) was passing by and even missing moves that Chessmaster 2000 (operating at the slower 1.78 Mhz of the Atari) found advantageous and often devastating. Four times we ended up retaking four to eight moves--rather embarassing. We wasted intellectual energy generating many rationalizations to excuse our falacious reasonings and justifications for taking back several moves of a foiled attack. Chessmaster 2000's ability to evaluate many plies--possible move sequences ahead--exceeded our expectations.

Soon we sunk to lower means of finding advantage. Yes, we resorted to using Sargon III on the Mac to sniff out a way to beat Chessmaster 2000. There was a certain point 14 moves into the game where we perceived ourselves as having attained significant material and positional advantage against a Sicilian type of defence. Ganging up two men and one computer working at four times the speed of the Atari 800XL against Chessmaster 2000 eventually worked. After having to retake a few very crucial moves again and again we finally found a path to checkmate in a mere five hours.

My friend gained a healthy respect for both the hard playing Chessmaster 2000 and the performance of the Atari 800XL. We did not care to explore Chessmaster at its higher levels that night.

We were willing to conceed that Chessmaster was a tougher opponent than other microcomputer chess programs currently on the market. It convincingly pushed two intelligent humans (who were using Sargon III as back-up) to the limit. Counting all our retaken moves it really was beating us four fifths of the time while operating at level 10 of its 19 playable levels. My near chessmaster friend kept saying next time he wouldn't treat the program so lightly.

I have been learning a thing or two from my friendly and patient Chessmaster 2000. The next time I see a shopping mall chess exhibition I may take a seat against an unsuspecting Chess Master to see how well my Chessmaster 2000 has taught me. I now have confidence that my Chessmaster 2000 can, as claimed, teach me world class chess or, at least, endlessly demonstrate it to me.

If you have an interest in chess then go ahead and spend the money for this chess program. Get it before your chess playing acquaintances find out just how good it is and

MORE ON PAGE 6

Pawn Hints

collected by Richard Dankert

OK, I FOUND THE KEY AND VOTED. I STILL HAVEN'T GOTTEN PAST THE DRAGON. I KNOW YOU HAVE TO DO SOMETHING WITH THE FIGURES IN THE SHADOWS, BUT I DON'T KNOW HOW TO GO ABOUT IT. ALSO DO YOU KNOW WHERE I CAN FIND THE DEVIL IN HELL? ALL I CAN FIND IS JERRY LEE LEWIS AND SOME DEMONS WHICH EAT ME IF I STAY TOO LONG. BY THE WAY, WHERE IS KRONOS? I WOULDN'T TAKE THE BODY TO HIM BUT I DON'T EVEN KNOW WHERE HE IS EVEN IF I WANTED TO GIVE HIM THE BODY.

I GOT THE LUMPS, AND GOT INOT THE ICE TOWER AND ALL THAT. YES, I DID GET THE NOTE AND THE CHEST ALREADY. WHEN I FIRST PLAYED, I TOOK THE NOTE AND LATER IN THE GAME HE RETURNED WITH THE CHEST. SINCE THEN I REPLAYED AND GOT A LITTLE FARTHER. ALL I NEED IS A LITTLE OVER A HUNDRED MORE POINTS. RIGHT NOW I'M STUCK IN HELL. DON'T KNOW WHAT TO DO. DO HAVE ANY IDES WHAT I'M SUPPOSED TO DO?

WELL, AS DAVE M. TOLD ME, TO GET PAST THE BOULDER YOU MUST USE A WORD WHICH WE THINK OF AS A NOUN AS A VERB. YOU ALSO NEED TO CHECK OUT THE CASTLE TOOLSHED FIRST. YOU DON'T GE TTHE WRISTBAND UNTIL THE END OF THE GAME AS FAR AS I KNOW. FOR THE BOARDS, YOU HAVE TO CLOSE THE DOOR FIRST. DID YOU CHECK ALL AROUND THE CASTLE GARDEN YET? THERE IS AN OBJECT IN THERE WHICH IS JUST AS GOOD AS MONEY, BUT YOU BETTER SAVE IT FOR LATER IN THE GAME AND WITHOUT IT, IT WOULD BE HELL.(BAD PUN)

GET EVERYTHING IN THE TOOLSHED, ESPECIALLY THE 2 ITEMS THAT CAN BE USED AS A LEVER. I JUST SAID THE NOUN THAT IS USED AS A VERB BY THE WAY. YOU NEED TO FIX TOGETHER THE 2 OBJECTS WITH AN ITEM THAT YOU HAD WITH YOU SINCE THE START. THE WATER THAT THE GURU WANTS IS IN THE MOUNTAINS PAST THE BOULDER. IT'S ALL OVER THE PLACE.

Axel, just a quick word---with all the info you are asking would take an hour to give it all to you!!! I assume this is not your first adventure game, so you should know how those things go. Unlike some games--examine all command does not tell all!!! Look under and in things...OK one clue- take the rake and hoe...as for the way to move the boulder...you DO have to use a word thought of in this country mostly as a noun, as a VERB soooo using the laws of physics - what would you need to move a big boulder ?? As

the game continues to remind ME -USE YOUR BRAIN!! Assassin will probably finish before I do...but I will help as much as I can...just slow down a bit...if you have spent all that time looking around and haven't "taken care of" the adventurer...you are spinnin' your wheels.....

ACTUALLY, TO GET THE KEY, ALL YOU HAVE TO DO IS SEARCH THE ADVENTURER AFTER YOU KILLED HIM. THAT'S WHAT I DID THE FIRST TIME I PLAYED. I BRIEFLY VISITED COMPUSERVE THE OTHER DAY AND READ SOME MESSAGES. IT DIDN'T HELP ME TOO MUCH BUT THAT WAS WHEN I FOUND OUT ABOUT THE COIN. WHEN I FOUND OUT ABOUT IT, I KNEW IMMEDIATELY WHERE TO FIND IT-THE SAME PLACE WHERE ALL COINS END UP. HAVE YOU FOUND THE DRAGON/PAPER ROOM YET? I HAVE GOTTEN PAST THE PAPER ROOM AND I'M STUCK IN HELL(AS IHAVE SAID 3 TIMES BEFORE). SEE IF SARA HAS ANY CLUES ON WHAT I'M SUPPOSED TO DO IN HELL...I KNOW WHAT THE DRAGON IS SUPPOSED TO EAT(THE DWARFS IN THE SHADOWS) BUT I DON'T KNOW HOW TO GET HIM TO EAT THEM INSTEAD. I GUESS I'LL FOOL AROUND WITH IT A LITTLE.

I'VE TAKEN THE PRINCESS BACK TO THE CASTLE, BUT IT SEEMED SUCH A WASTE OF TIME TO JUST HAVE HE RUN OFF THAT, WHEN I RESTARTED, I DIDN'T BOTHER. WELL YOU HAVE IT SOFT OF WRONG HER. I'M IN HELL AND I DON'T KNOW WHAT TO DO. I KNOW YOU TALK TO LUCIFER BUT DON'T KNOW WHERE TO FIND HIM. HAVE YOU GOTTEN PAST THE PAPER WALL ROOM YET? IF NOT THEN YOU STILL HAVE SOME PROBLEM SOLVING TO DO. THE PORTER AT THE GATES OF HELL NEEDS A TIP BUT HE DOESN'T WANT MONEY. WHEN HE KILLS YOU, LEARN FROM YOUR MISTAKES. IN OTHER WORDS, READ CAREFULLY, WHAT HE DOES TO YOU. THERE IS AN IMPORTANT CLUE THERE AND SHOWS YOU WHAT THE MONEY IS REALLY FOR.

HAVE YOU GOTTEN THE GURU HIS WATER YET? IF SO THEN THE LIGHT SOURCE WILL APPEAR. IF YOU ARE STILL STUMPED(HINT,HINT) THEN WRITE BACK TO ME. KRONOS HAS AN ITEM WHICH WILL KILL THE ADVENTURER. IF HE SHOWS UP AGAIN. HE WILL PROBABLY OFFER IT TO YOU RIGHT AWAY, BUT YOU CAN GET IT AT THE BEGINNING OF THE GAME BY ASKING HIM ABOUT THE WRISTBAND.

DO YOU MEAN THE PORTER AT THE GATES OF HELL? IF SO, IT'S NOT MONEY HE WANTS DID YOU EVER READ MACBETH? WELL, THE PORTER IS SUPPOSED TO BE THE PORTER IN MACBETH, AND LIKE THE PORTER IN MACBETH, HE HAS HAD A LITTLE TOO MUCH(BUT NOT ENOUGH FOR HIM) AND ALL HE WANTS IS FOR YOU TO RAISE HIS "SPIRITS". NOW FOR SOMETHING COMPLETELY DIFFERENT ... HAHAHAHAHAHA !!! I DID IT !!! GOT PAST THE STUPID DRAGON. I JUST CALLED UP COMPUSERVE AND READ ONE OF SARA'S CLUES. AFTER THE SECOND TIME SHE POSTED THE CLUE, IT BECAME CLEAR WHAT I WAS SUPPOSED TO DO. JUST THINK OF BOOTLEG GIN MINUS "MOON". YOU HAVE TO USE AN OBJECT THAT YOU HAVE USED A LOT ALREADY EVER SINCE YOU GOT PAST THE BOULDER. THE NEXT THING YOU HAVE TO DO IS DO SOMTHING WITH YOUR FINGER THAT IS IMPOLITE(SARA'S CLUE). UNFORTUNATELY, WHEN YOU GET PAST HIM, THE DUDE IN THE NEXT ROOM KICKS YOU OUT. (GUESS WHO IT IS). I THINK YOU HAVE TO MEET THE DEVIL FIRST.

DON'T KNOW WHERE HELL IS? I'LL GIVE YOU A BIG HINT. IT'S PAST THE PAPER ROOM. THE PAPER ROOM IS PRETTY HARD TO PASS BUT IF YOU LOOK AROUND, YOU WILL FIND SOMETHING THAT WILL HELP YOU GET DOWN TO HELL. YOU ALSO NEED ANOTHER OBJECT FOUND IN A ROOM THAT GOES UP AND DOWN. IT'S PRETTY HARD GO GET BY SINCE YOU HAVE TO GET YOUR WORDING RIGHT.
P.S. I DON'T REMEMBER WHO YOU REALLY ARE, BUT IF YOU HAVE SEEN THE MESSAGE I PUT UP CONCERNING MY PROBLEM, THEN YOU MAY KNOW WHO I AM.

Son, its been too long, Please write!
-Ma editor

From Page 5

play by mail for money. You may earn enough to buy them copies as well. Running this program on an Atari ST or an Amiga using the mouse would provide very interesting chess at the even the less than 1 minute response time levels. Keep your eyes peeled for ChessExpert 2500!

Personal note: Steve Armstrong is an avid Atarian since 1981, uses a mutant (i.e. several non-standard chips) Atari 800 and 800XL. Interests: Programming in ACTION!, C, BASIC XL, likes applications programming for psychology and business and using such programs; and enjoys immersing himself in games for the 'tough-minded'.

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PROFESSIONAL GEM
By Tim Oren
Column #7 Menu Structures

This is article number seven in the ST PRO GEM series. In this installment, I will be discussing GEM menu structures and how to use them in your application. You will find the download file containing the code for this column on Compuserve in the file GEMCL7.C in DL3 of the ATARI16 SIG (PCS-58).

MENU BASICS. In ST GEM, the menu consists of a bar across the top of the screen which displays several sub-menu titles. Touching one of the titles causes it to highlight, and an associated "drop-down" to be drawn directly below on the screen. This drop-down may be dismissed by moving to another title, or by clicking the mouse off of the drop-down.

To make a selection, the mouse is moved over the drop-down. Each valid selection is highlighted when the mouse touches it. Clicking the mouse while over one of these selections picks that item. GEM then undraws the drop-down, and sends a message to your application giving the object number of the title bar entry, and the object number of the drop-down item which were selected by the user. The selected title entry is left highlighted while your code processes the request.

MENU STRUCTURES. The data structure which defines a GEM menu is (surprise!) an object tree, just like the dialogs and panels which we have discussed before. However, the operations of the GEM menu manager are quite different from those of the form manager, so the internal design of the menu tree has some curious constraints.

The best way to understand these constraints is to look at an example. The first item in the download is the object structure (only) of the menu tree from the GEM Doodle/Demo sample application.

The ROOT of a menu tree is sized to fit the entire screen. To satisfy the visual hierarchy principle (see article #5), the screen is divided into two parts: THE BAR, containing the menu titles, and THE SCREEN, while contains the drop-downs when they are drawn. Each of these areas is defined by an object of the same name, which are the only two objects linked directly below the ROOT of a menu tree. You will notice an important implication of this structure: The menu titles and their associated drop-downs are stored in entirely different subtrees of the menu!

While examining THE BAR in the example listing, you may notice that its OB_HEIGHT is very large (513). In hexadecimal this is 0x0201. This defines a height for THE BAR of one character plus two pixels used for spacing. THE BAR and its subtree are the only objects which are drawn on the screen in the menu's quiescent state.

The only offspring object of THE BAR is THE ACTIVE. This object defines the part of THE BAR which is covered by menu titles. The screen rectangle belonging to THE ACTIVE is used by the GEM screen manager when it waits for the mouse to enter an active menu title. Notice that THE ACTIVE and its offspring also have OB_ HEIGHTs with pixel residues.

The actual menu titles are linked left to right in order below THE ACTIVE. Their OB_Xs and OB_WIDTHs are arranged so that they completely cover THE ACTIVE. Normally, the title objects are typed G_TITLE, a special type which assures that the title bar margins are correctly drawn.

THE SCREEN is the parent object of the drop-down boxes themselves. They are linked left to right in an order identical with their titles, so that the menu manager can make the correct correspondence at run-time. The OB_X of each drop-down is set so that it is positioned below its title on the screen.

Notice that it is safe to overlap the drop-downs within a menu, since only one of them will be displayed at any time. There is one constraint on the boxes however: They

must be no greater than a quarter screen in total size. This is the size of the off-screen blit buffer which is used by GEM to store the screen contents when the drop-down is drawn. If you exceed this size, not all the screen under the drop-down will be restored, or the ST may crash!

The entries within a drop-down are usually G_STRINGs, which are optimized for drawing speed. The rectangles of these entries must completely cover the drop-down, or the entire drop-down will be inverted when the mouse touches an uncovered area! Techniques for using objects other than G STRINGs are discussed later in this column.

The first title and its corresponding drop-down are special. The title name, by custom, is set to DESK. The drop-down must contain exactly eight G_STRING objects. The first (again by custom) is the INFO entry, which usually leads to a dialog displaying author and copyright information for your application. The next is a separator string of dashes with the DISABLED flag set. The following six objects are dummy strings which GEM fills in with the names of desk accessories when your menu is loaded.

The purpose of this description of menu trees is to give you an understanding of what lies "behind the scenes" in the next section, which describes the run-time menu library calls. In practice, the Resource Construction Set provides "blank menus" which include all of the required elements, and it also enforces the constraints on internal structure. You only need to worry about these if you modify the menu tree "on-the-fly".

USING THE MENU. Once you have loaded the application's resource, you can ask the AES to install your menu. You must first get the address of the menu tree within the resource using:

```
rsrc_gaddr(R_TREE, MENUTREE, &ad_menu);
```

assuming that MENUTREE is the name you gave the menu in the RCS, and that ad_menu is a LONG which will receive the address. Then you call the AES to establish the menu:

```
menu_bar(ad_menu, TRUE);
```

At this point, the AES draws your menu bar on the screen and animates it when the user moves the mouse into the title area.

The AES indicates that the user has made a menu selection by sending your application a message. The message type is MN_SELECTED, which will be stored in msg[0], the first location in the message returned by evnt multi().

The AES also stores the object number of the selected menu's title in msg[3], and the object number of the selected menu item in msg[4]. Generally, your application will process menu messages with nested C switch statements. The outer switch will have one case for each menu title, and the inner switch statements will have a case for each entry within the selected menu. (This implies that you must give a name to each title and to each menu entry when you create the menu in the RCS.)

After the user has made a menu selection, the AES leaves the title of the chosen menu in reverse video to indicate that your application is busy processing the message. When you done with whatever action is indicated, you need to return the title to a normal state. This is done with

```
menu_tnormal(ad_menu, msg[3], TRUE);
```

(Remember that msg[3] is the title's object number.)

When your application is ready to terminate, it should delete its menu bar. Do this with the call: menu_ bar(ad_ menu, FALSE);

GETTING FANCY. The techniques above represent the bare minimum to handle menus. In most cases, however, you will want your menus to be more "intelligent" in displaying the user's options. For instance, you can prevent many user errors by disabling inappropriate choices, or you can save space on drop-downs by showing only one line for a toggle and altering its text or placing and removing a check mark when the state is changed. This section discusses these and other advanced techniques.

It is a truism of user interface design that the best way to deal with an error is not to let it happen in the first place. It many cases, you can apply this principle to GEM menus by disabling choices which should not be used. If your application uses a "selection precedes action" type of interface, the type of object selected may give the information needed to do this. Alternately, the state of the underlying program may render certain menu choices illegal.

GEM provides a call to disable and re-enable menu options. The call is:

```
menu_ienable(ad_menu, ENTRY, FALSE);
```

to disable a selection. The entry will be grayed out when it is drawn, and will not invert under the mouse and will not be selected by the user. Substituting TRUE for FALSE re-enables the option. ENTRY is the name of the object which is being affected, as assigned in the RCS.

Note that menu_ienable() will not normally affect the appearance or operation of menu TITLE entries. However, there is an undocumented feature which allows this. If ENTRY is replaced by the object number of a title bar entry with its top bit set, then the entire associated drop-down will be disabled or re-enabled as requested, and the title's appearance will be changed. But, be warned that this feature did not work reliably in some early versions of GEM. Test it on your copy of ST GEM, and use it with caution when you cannot control the version under which your application may run.

It is also possible to disable menu entries by directly altering the DISABLED attribute within the OB_STATE word. The routines enab_obj() and disab_obj() in the download show how this is done. They are also used in set_menu(), which follows them immediately.

Set_menu() is a utility which is useful when you wish to simultaneously enable or disable many entries in the menu when the program's state changes or a new object is selected by the user. It is called with

```
set_menu(ad_menu, vector);
```

where vector is a pointer to an array of WORDs. The first word of the array determines the default state of menu entries. If it is TRUE, then set_menu() enables all entries in every drop-down of the menu tree, except that the DESK drop-down is unaffected. If it is FALSE, then every menu entry is disabled.

The following entries in the array are the numbers of menu entries which are to be toggled to the reverse of the default state. This list is terminated by a zero entry.

The advantage of set_menu() is that it allows you to build a collection of menu state arrays, and associate one with each type of user-selected object, program state, and so on. Changing the status of the menu tree may then be accomplished with a single call.

CHECK, PLEASE? One type of state indicator which may appear within a drop-down is a checkmark next to an entry. You can add the checkmark with the call:

```
menu_icheck(ad_menu, ENTRY, TRUE);
```

and remove it by replacing the TRUE with FALSE. As above, ENTRY is the name of the menu entry of interest. The checkmark appears inside the left boundary of the entry object, so leave some space for it.

The menu_icheck() call is actually changing the state of the CHECKED flag within the entry object's OB_STATE word. If necessary, you may alter the flag directly using do_obj() and undo_obj() from the download.

NOW YOU SEE IT, NOW YOU DON'T. You can also alter the text which appears in a particular menu entry (assuming that the entry is a G_STRING object). The call

```
menu_text(ad_menu, ENTRY, ADDR(text));
```

will substitute the null-terminated string pointed to by text for whatever is currently in ENTRY. Remember to make the drop-down

wide enough to handle the largest text string which you may substitute. In the interests of speed, G_STRINGs drawn within drop-downs are not clipped, so you may get garbage characters on the desktop if you do not size the drop-down properly!

The menu_text() call actually alters the OB_SPEC field of the menu entry object to point to the string which you specify. Since the menu tree is a static data structure which may be directly accessed by the AES at any time, be sure that the string is also statically allocated and that it is not modified without first being delinked from the menu tree. Failure to do this may result in random crashes when the user accesses the drop-down!

LUNCH AND DINNER MENUS. Some applications may have such a wide range of operations that they need more than one menu bar at different times. There is no problem with having more than one menu tree in a resource, but the AES can only keep track of one at a time. Therefore, to switch menus you need to use menu_bar(ad_menu1, FALSE); to release the first menu, then use menu bar(ad_menu2, TRUE); to load the second menu tree.

Changing the entire menu is a drastic action. Out of consideration for your user, it should be associated with some equally obvious change in the application which has just been manually requested. An example might be changing from spreadsheet to data graphing mode in a multi-function program.

DO IT YOURSELF. In a future column, I will discuss how to set up user-defined drawing objects. If you have already discovered them on your own, you can use them within a drop-down or as a title entry.

If the user-defined object is within a drop-down, its associated drawing code will be called once when the drop-down is first drawn. It will then be called in "state-change" mode when the entry is highlighted (inverted). This allows you to use non-standard methods to show selection, such as outlines.

If you try to insert a user-defined object within the menu title area, remember that the G_TITLE object which you are replacing includes part of the dark margin of the bar. You will need to experiment with your object drawing code to replicate this effect.

MAKE PRETTY. There are a number of menu formatting conventions which have become standard practice. Using these gives your application a recognizable "look-and-feel" and helps users learn it. The following section reviews these conventions, and supplies a few hints and tricks to obtain a better appearance for you menus.

The second drop-down is customarily used as the FILE menu. It contains options related to loading and saving the files used by the application, as well as entries for clearing the workspace and terminating the program.

You should avoid crowding the menu bar. Leave a couple of spaces between each entry, and try not to use more than 70% of the bar. Not only does this look better, but you will have space for longer words if you translate your application to a foreign language.

Similarly, avoid cluttering menu drop-downs. Try to keep the number of options to no more than ten unless they are clearly related, such as colors. Separate off dissimilar entries with the standard disabled dashes line. (If you are using set menu(), remember to consider the separators when setting up the state vectors.)

If the number of options grows beyond this bound, it may be time to move them to a dialog box. If so, it is a convention to put three dots following each menu entry which leads to a dialog. Also, allow a margin on the menu entries. Two leading blanks and a minimum of one trailing blank is standard, and allows room for checkmarks if they are used.

Dangerous menu options should be far away from common used entries, and are best separated with dashed lines. Such options

should either lead to a confirming go/no-go alert, or should have associated "undo" options.

After you have finished defining a menu drop-down with the RCS, be sure that its entries cover the entire box. Then use ctrl-click to select the drop-down itself, and SORT the entries top to bottom. This way the drop-down draws in smoothly top to bottom.

Finally, it is possible to put entries other than G_STRINGs into drop-downs. In the RCS, you will need to import them via the clipboard from the Dialog mode.

Some non-string object, such as icons and images, will look odd when they are inverted under the mouse. There is a standard trick for dealing with this problem. Insert the icon or whatever in the drop-down first. Then get a G_IBOX object and position and size it so that it covers the first object as well as the extra area you would like to be inverted.

Edit the G_IBOX to remove its border, and assign the entry name to it. Since the menu manager uses objc_find(), it will detect and invert this second object when the mouse moves into the drop-down. (To see why, refer to article #5.) Finally, DO NOT SORT a drop-down which has been set up this way!

Our Leader's words:

Ron Friedel
MILATARI President

Traditionally, the president of MILATARI has always written something in the newsletter. (Actually, Roy Duvall, the Newsletter Editor, would be happy to get something from all of you. If you have something to pass on to the membership, put it down on paper and pass it on to Roy.) There isn't anything that I have to say of real importance but I would like to pass on a few thoughts to you.

My son, Mark, and I joined MILATARI in March of 1982. We remember the excitement of each monthly meeting; there always seemed to be something new and wonderful that was being demonstrated and talked about. There has been a slowdown, lately, in numbers of new software releases in the 8-bit line but this is more than compensated by the neat things coming out for the ST.

Some of the members of MILATARI have been using computers for such a long time that it is hard to get them excited about new hardware or software. I do think that those long time members will see something of interest at the Summer CES that is now started in Chicago.

We need to have some way to get the long-time members involved with the new members. The former group has lots of experience and knowledge that could make life easier for the new people. The problem is that all of us have great demands on our personal time so we are reluctant to offer our help to others. Each of us needs to be more involved in the club. Introduce yourself and ask questions either publicly or privately. If you are an older member, try to be helpful; no question should be laughed at. Remember, each of us was a beginner at one time.

For my own part, I will try to bring my home system (800XL, disk drives, printer, modem and interface) to each meeting and set it up in one of the classrooms at Armbruster School. I will hold a session for the newer members at which I will try to answer any and all questions. This Beginners SIG (Special Interest Group) will be held in the time period of about 2:30 to 3:30, before the main business meeting of MILATARI. I will try to anticipate any of your questions and hope that I am prepared to give you an answer. If discussion on some appropriate topic. If any of you want a discussion on a certain topic, contact me at home before the meeting so that I can be prepared.

I hope that the following year will be fruitful for all of us. I would be happy to talk to any and all of you about suggestions on how we might accomplish this. After all, if I run out of Atari related topics to talk about at the meetings, I might start talking about earthquakes, bicycling or German choral singing. You wouldn't want that to happen, would you? See you on June 21st.

Worldwide™ Users Network

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ANTIC EUROPEAN REPORT

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ANTIC'S EUROPEAN ATARI REPORT PART 1: LONDON

Antic Publisher James Capparell and Marketing Director Gary Yost have returned from a tour of three European Atari computer shows including the largest computer show in the world, West Germany's CEBIT -- otherwise known as the Hanover Fair.

THE IBM-ST Real MS-DOS compatibility is finally a reality for the Atari 520ST. At an Atari computer show sponsored by Atari User magazine in London, Atari Corp. unveiled a product in the final development stages code-named the MS-DOS Box. Designed by Atari engineer Jim Tittsler, the MS-DOS box is essentially an 8088 microprocessor encased in a metal box like a hard disk drive and plugged into the DMA port. It comes with half a megabyte of memory, an 8088 microprocessor and a socket for the 8087 math co-processor. During a tour of three major European computer shows including the Hanover Fair in West Germany, Antic publisher Jim Capparell saw the ST running MS-DOS and Multiplan. Atari Corp. claims the MS-DOS box will enable the ST to be compatible with 90% of IBM-PC software at speeds greater than the IBM PC. However, Tittsler says the box won't be able to run graphic-based software such as Lotus 1-2-3 until the final BIOS routines are written. The MS-DOS box also offers significant potential for true multi-tasking ability or high-speed graphics on the ST. By using the 8088 and 8087 as co-processors for the ST, there is a possibility of using them to process data for graphic screens while doing a separate task with the 68000 microprocessor. The projected retail price is about $300. Atari also announced a CP/M operating system emulator in software that should soon be available in the United States for $49.95. At the London show, Antic saw libraries of CPM software already transferred to ST disk format.

PRODUCTS AND PROMISES For the eight-bit Ataris, the most significant new product was the long-promised 80-column adapter that plugs into the XL or XE computer. Atari had originally promised an 80-column cartridge. However, the final product will be a case that plugs into the serial port. There was an array of new software including a computer chess program, sophisticated animation software, and a $3,000 Computer Aided Design system for the 1040ST suitable for professional architects and interior designers. Antic saw a variety of C development tools, editors, and loads of music and entertainment software. Atari User magazine claimed that the Atari Computer Show, March 5 at the Novotel, London was the first Atari-specific exhibition ever. Antic was among 50 booths dedicated to Atari ST, XL and XE. Over 100 new products were unveiled and according to Atari User magazine, aproximately two thirds of the products on display were for the 8-bit Atari computers. However, most of those products were aimed at the U.K. market, such as Atari's release of the XC11, a replacement for the 1010 cassette deck to be bundled with the 130XE. Computer Concepts from Hempstead, England showed a preliminary version of what Antic Marketing Director Gary Yost calls "the fastest BASIC I've seen on any machine." This remarkable ST BASIC supports in-line assembly code and key words for every GEM function call. It retails for less than $100 in cartridge form, and should be available in the early Fall. Software Punch of Liverpool showed a small plug-in card for the ST that gives it two RS-232 ports and sells for about 50 British pounds. The software house is working on an Ethernet-compatible network of cables that allow ST computers to share information. For three solid days, Jeff Minter, the wild-haired, 23 year old president of Llamasoft demonstrated his creation, the Colourspace light synthesizer. A BARCO video projection system beamed his pulsating kaleidoscopic images on an 8-foot diagonal screen. Jeff's mum was staffing the booth, selling his ST Colourspace to eager crowds. The $29.95 program is available in the U.S. through Apex Distribution in Boston, Mass. Recently Minter rented London's Baker planetarium to demonstarte Colourspace to the press. Not surprisingly, in the Colourspace manual, he cites as his influences, "Pink Floyd, Rush and Laserium." (A popular laser light show that appears in planetariums.) Metacomco will port a full implementation of Cambridge LISP to the ST and is aiming for a Fall release of the promised product. Supra Corp. of Albany, Oregon was showing their 20 megabyte hard disk. (It should be available from local retailers in the near future). The $1,000 price seems a bit steep, but it is reportedly three times faster than the not-yet-available Atari hard disk. John Wiley, President of Supra, showed Antic a 60 megabyte hard disk prototype and hinted about a future streaming tape backup. Mirrorsoft announced Fleet Street Editor, a word processing and graphics page layout program that functions like Springboard's Newsroom on the Apple II, but produces "professional level" desktop publishing and photocomposition on the ST. Look for Fleet Street Editor to hit the U.S. this summer. Microdeal announced Disk-Help, a $29.95 disk recovery program. Miracle Technology Ltd. of England was showing Multi-Viewterm/Datatari, an 8-bit communications program and serial interface capable of accessing graphic-based videotext, electronic mail, and telex. The interface is equipped with a 25-way plug to fit several modems.

TRANS-ATLANTIC SOFTWARE Perhaps the most significant trend in software is the increasing communication between European and American software houses. Much of the software displayed was American product brought to the U.K. under license or by aggressive dealers. For example, the United States-based Michtron linked up with the United Kingdom firm of Microdeal to distribute Timebandit and Mi-Term in Europe. Likewise, U.S.-based distributors were searching for European software to bring back to the states. The ST is already cracking the European education market. Universities are adopting the ST as the machine of choice. Fortran 77, long a standard in universities, is finished from two companies -- Philon of New York and Prospero in the U.K. With GEM bindings included, the Prospero version should retail for about $150. Fortran in one standard or another has been around since the late '50s and as a result a library of Public domain Fortran-compatible software for engineering applications is already available. At the current exchange rate, the Apple Macintosh costs $4,000 in the U.K. Not suprisingly, the ST is eating it up. Atari is holding the price of ST to roughly the U.S. equivalent. European programmers and dealers were quick to recognize the ST's incredible price/performance ratio.

ANTIC'S EUROPEAN REPORT PART 2:
WEST GERMANY AND FRANCE
by Gigi Bisson, ANTIC Assistant Editor

(Antic Publisher James Capparell recently returned from a one month tour of computer shows in Europe. This is the second installment in our three-part report.

HANOVER, WEST GERMANY -- No hype. It's the largest computer trade show in the world. CeBIT -- even grander than the mighty COMDEX. (CeBIT is a German acronym for World Center for Office, Data and Communications Technology.) During the week of March 12, the annual show in Hanover, West Germany boasted 2,100 exhibitors spread throughout 205,000 meters of display area in 13 buildings. Atari Corp. was in building 13, but this time it was a lucky number. "We've been hearing that the Atari ST is now the largest selling computer in Germany, but I never believed it until I saw this show," says Antic Publisher James Capparell. Every significant hardware and software organization from Atari to IBM was at the Hanover show, including 102 exhibitors from the U.S. and exhibitors from countries that aren't often associated with high technology, such as Czechoslovakia, Yugoslavia, Hungary and South Africa. Atari Germany spared no expense at their lavish booth. The center of the vast display was almost a restaurant in itself, tempting dealers and retailers with rich food, German Beer and fine chocolates. At the perimeter were nearly 50 third-party developers, including Antic. The exhibitors showed many of the same products that had been unveiled the previous week at an Atari show in London. At a Hanover press conference, Atari announced the MS/DOS box, 20 megabyte hard disk drive, 1040ST computer and 520ST+ computer. Atari also spoke of their commitment to upward compatiblity, pledging that all future plug-in peripherals and add-ons will be compatible with all versions of ST hardware. Atari engineers are working on a 1,000 X 1,000 pixel color monitor for CAD/CAM purposes, with a companion hardware expansion unit capable of driving that resolution on the ST. Atari hopes to keep the price down to $1,000. Atari Corp.'s $49.95 CP/M operating system emulator software is not yet available in the U.S., but apparently it is already in use in West Germany. (CP/M, one of the earliest microcomputer operating systems, is used by the Osborne and Kaypro computers.) German computer magazines are already advertising CP/M software for the ST. In 68000er magazine, there are advertisements for Micro Pro Wordstar 3.0 "fur den Atari ST." The software is in ST 3 1/2 inch disk format and requires the CP/M emulator. Another German magazine featured a review of Borland International's Turbo Pascal running on the ST with CP/M emulation. Antic picked up copies of several German computer magazines covering the ST, including Happy Computer, ST Computer, Level 16, and 68000er -- a magazine devoted to 68000-based Atari ST, Apple Macintosh and Commodore Amiga. Antic made arrangements to exchange programs and articles with some of these publications. A few of the new products on display.

* RDS software unveiled, SideClick, an ST clone of Borland International's Sidekick.
* A printed circuit board CAD development package, including a plotter driver.
* A full MIDI software package driving a Yamaha DX-7 synthesizer.
* Many of the products were business software packages written to German business standards, and thus impractical for U.S. use.
* Firebird, the firm that developed The Pawn graphic adventure game for the ST, discovered a way to decrease loading time, and they plan to incorporate this technique in future releases. Antic also saw several German developers that had found ways to speed up disk loads.
* A bar-code printer and reader for the ST, compiled and interpreted BASIC languages.
* A scientific lab data acquisition system, and a system that enables users to download weather satellite information with the ST.
* Metacomco will port a full implementation of Cambridge LISP to the ST, slated for a Fall release.
* Paperlogic introduced an ST Toolbox that included a MS-DOS-like shell and sells for under $40.
* Abacus Software displayed a Printed Circuit Board CAD design system that was nearly in the Beta stage.

Many companies were capitalizing on the ST's MIDI interface with musical software. The most intriguing exhibit featured an Analog to Digital/Digital to Analog (AD/DA) workstation, comprised of $15,000 worth of hardware powered by an ST. VIVE LE ATARI And finally, at the end of an exhausting tour, Paris, for the first Atari-exclusive show ever held in France. The show featured 50 developers, most were French. In France, Antic saw some fantastic artwork created with DEGAS and NEOchrome, and hopes to make arrangements with the artists to publish this work in future issues of Antic. But the star of the show was a professional architectural CAD-CAM system from a Netherlands firm. Andromeda Software, a Hungarian firm with offices in the United States, showed two graphic tools for the ST, The Animator, a graphic animation package and a picture processor. Andromeda is also working on ST versions of the classic Atari arcade games Missile Command, Battlezone and Millipede.

The trip verified both Atari's commitment to worldwide ST marketing, and the world's commitment to Atari. "Everywhere we went in Europe, I was surprised to meet Antic readers with complimentary things to say," says Antic publisher Capparell. "Antic and Atari have friends around the world."

bus

(bŭs) n. Path over which data are transferred.

In computers, as in life, you're either on the bus or off it.

wetware

(wĕt'wâr) n. The human brain.

Most humans give their wetware a rest on weekends.

computer

(kuhm·pyo͞o'tuhr) n. A machine that can accept data, manipulate or store that data, and deliver the results as some form of output.

Computers have become known for their versatility and speed.

(ED) CETERA

Some notes from the BORED meeting. The treasury is not quite empty but we should be able to pay for this newsletter. The special disks earmarked for BBS raised enough to buy a used disk drive and 1050 intreface. That was the only time I saw Rich smile. Carl Mielcarek raised some concern about the current meeting place and the costs involved with rent. If you have any concerns pro or con please let Carl know. Steve Tupper assured us that this year we should be able to meet inside the building in June. Dennis Wilson said the ST library is very popular and growing rapidly. We should have both 5 and 3 inch blank disks at all future meetings. I tried to resign but they wouldn't let me - Thanks - the arm should be out of the cast by next meeting. Steve Armstrong promised that in the future meetings he would write the notes but he couldn't hear with all the noise down at my end of the table. (Nolan and I were just fighting over 3 months of OLD newsletters that Bill Feest brought).

Speaking of other groups newsletters, Well, I don't know whether to be pleased or peeved. I found a near duplication of the ZoomRacks review I wrote a few months ago. The thing that bothered me was it stated it was a (FR)ANTIC exclusive and was authored by John Adams. And I thought that it wasn't quite up to the MILATARI standard - just goes to show - One man's trash is anothers exclusive!

From BASE Bloomington Atari Systems Enthusiasts - In an article by Marty Erwin about PC PURSUIT - the GTE service to connect various cities for BBS communication for a flat $25 a month charge - offered the following numbers to the GTE BBS to make known your demand for adding Milwaukee to the list of select cities. 800-835-3001 and 800-222-6021.

Where is your Article for YOUR Newsletter

Reprinted from Computer Squad

Mission Asteroid from Sierra On-line The Solution

You start out facing a building. Open the door and you will hear a beep-beep from your watch. Push the switch and you will hear a voice from mission control telling you the password. Go door and you will see a secretary at her desk. Say the password and she will let you pass. Go North and you will be at the intersection of the passages. Go West and you will be in the briefing room with a general waiting for you. Salute and he will give you your mission. Head East a couple of times and you will find the computer room. There is a diskette here, get diskette and put diskette into drive. The computer will give you your flight plan. Go East again and you will find some explosives. Get explosives and head East again. You are now in the gym. Since you are feeling a little out of shape lift weights and you will feel better. Head East to the showers and take shower to cool off. West and North twice and you will be in the examination room. Open door and go West and North. You will be at the ladder to your rocket. Climb ladder and push button to open the door. Go door and push blue button. The South door will close and the north door will open. Go North and West and get suit. Wear suit and head East to the control room. Push violet button to close the doors and push the throttle to take off. Once you are in space, push black, push orange, push blue and pull throttle. Congratulations you are on the asteroid but the clock is still ticking. Push violet to open the door and go south to the air lock. Turn dial on your space suit so you can breath on the asteroid. Push the orange button to open the space craft. Head South and Down and you will be on the surface of the asteroid. Head South, East and East and you will be near a cave. Go cave and head South twice. There is a deep pit here, set the timer on your explosives to 150. Since you don't want to carry it any more drop explosives in pit. With the explosives planted go North twice and South once. You can see the rocket in the distance so go North and you are at the foot of the ladder. Go up and go door, you will be in the airlock again. Push blue and the South door will close and the North door will open. Go North and push violet to close the doors again. Push throttle and push blue, then black then blue then black. You should see good old mother earth in your window. Pull throttle to land back at the space center. Hold on you are almost there. About all you have to do now is kill time till the asteroid explodes. Push violet, to open the door; go South to the airlock and push orange to open the outer door. Then go South, Down, South and East. You should be in the examination room. If you head back to the briefing room the asteroid should have exploded by the time you get there.

CONGRATULATIONS! You have saved the world and gained its respect by solving MISSION ASTEROID.

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Your contributions of articles are always welcome. You may submit your article on ATARI compatible cassette or diskette, on typewritten form or you can arrange with the editor to upload your file via modem. You can send Graphics eight or seven plus screens stored on disk in Micropainter or Micro Illustrator formats.

Milwaukee Area Atari User's Group

MILATARI is an independent, user education group which is not affiliated with ATARI INC. The newsletter is the official publication of MILATARI and is intended for the education of its members as well as for the dissemination of information concerning ATARI computer products.

MILATARI membership is open to individuals and families who are interested in using and programming ATARI computers. The membership includes a subscription to this newsletter and access to the club libraries. The annual membership fee is $15 for individuals or $20 for a family.

Vendors wishing to display and/or sell items at MILATARI meetings must make prior arrangements with the club vice president. Rates are $10 per meeting or $90 per year payable in advance.

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Other computer user groups may obtain copies of this newsletter on an exchange basis.

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This newsletter will accept camera ready advertising copy from anyone supplying goods and services of interest to our membership.

Current paid members of MILATARI may place classified ads in the newsletter at no charge.

Advertising Rates

Full page	$37.50
Half page	$20.00
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